(c) the impediments coming in the way of improving the T&D losses in the country are :

(i) Week and inadequate sub-transmission and distribution system.

(ii) Large-scale rural electrification programme undertaken in the country resulting in long lines and extension of distribution network without strengthening the back up transmission and sub-transmission system.

(iii) Too many transformation stages resulting in high component of transformation losses.

(iv) Improper load management resulting in overloading of system.

(v) Low power factor due to pumping load in rural areas and air-conditioners, coolers and industrial loads in urban areas and inadequate reactive compensation at the loading point.

(vi) Low quality of construction and inadequate maintenace of equipment.

(vii) Unmetered supply to agricultural pumps and small domestic connection to weaker sections of the society in some States.

(viii) Pilferage and theft of energy.

In order to reduce the technical T&D losses. The CEA has issued the following guidelines :

(a) upgradation of operating voltages;

(b) reduction of length of LT lines;

(c) location of transformers near load centres;

(d) adoption of low capacity transformers at consumers premises;

(e) installation of shunt capacitors;

(f) improvement in construction and operation techniques; and

(g) systematic and methodological approach for planning and design of distribution system on the long term basis.

In order to reduce the commercial losses and losses due to pilferage and theft, the following steps have been taken :

(a) The Indian Electricity Act, 1910 has been amended to make the theft of electricity a congnizable offence.

(b) CEA has also issued guidelines for conducting energy audit;

(c) In the Common Minimum National Action Plan for Power issued in December, 1996 after consultations with the State Governments, following measures have been suggested for reduction of T&D losses;

- Compulsory metering at substations on all major feeders.
- Compulsory metering of all new electricity connections. Also connections to agricultural sector exceeding 10 HP should be completed within a period of two years.
- All electric supplies to be metered by 2002 AD.
- Compulsory annual energy audit of large consumers i.e. 100 KVA would be ensured.
- Time of the day metering would be introduced for big power consumers for better load management.

Expenditure on Ocean Development

5059. SHRI MANIKRAO HODLYA GAVIT : Will the PRIME MINISTER be pleased to state :

(a) the total expenditure Incurred by the Government on Ocean Development during last thee year, year-wise;

(b) whether major aims behind such expenditure also include exploration of natural resources lying in the ocean;

(c) if so, the details thereof;

(d) whether any assessment has been made to ascertain the monetary value of the resources explored/ procured so far, or proposed to be procured in the near-future; and

(e) the manner in which the achievements compare with the expenditure in this regard ?

THE MINISTER OF STATE OF THE MINISTRY OF PLANNING AND PROGRAMME IMPLEMENTATION AND MINISTER OF STATE OF THE MINISTRY OF SCIENCE AND TECHNOLOGY (SHRI YOGINDER K. ALAGH) : (a) The expenditure incurred during the last three years by the Department of Ocean Development year-wise, is as under :

(Rs. in crore)

Year	Plan	Non-Plan	Total
1994-95	43.76	14.60	58.36
1995-96	43.74	13.75	56.49
1996-97	44.97	19.11	64.08

(b) and (c) Yes, Sir. Under the Polymetallic Nodules Programme (PWN), survey exploration of the manganese nodules in the Central Indian Oean Basin is being carried out as a part of the international commitment.

(d) Yes, Sir.

(e) Since the survey and exploration of the manganese nodules is a Science and Technology Development Programme, no comparison can be drawn on the achievements therein with the expenditure incurred under the PMN programme.